

SEQUENCE LISTING

<110> DIVER TEAR PARTIO

ROBERTSON, Dan SANYAL, Indrajit ADHIKARI, Robert

- <120> CATALASES
- <130> DIVER1100-4
- <140> US 09/884,889
- <141> 2001-06-19
- <150> US 09/412,347
- <151> 1999-10-05
- <150> US 08/951,844
- <151> 1997-10-16
- <150> US 08/674,887
- <151> 1996-07-03
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52

31

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<212> PRT

<213> Alcaligenes (Deleya) aquamarinus

<400> 6

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Cys Arg Ala Phe Val Pro Leu Val Ser Pro Arg His Arg Ala Ile Arg 20 25 30

Glu Arg Ala Met Ser Gly Lys Cys Pro Val Met His Gly Gly Asn Thr 35 40 45

Ser Thr Gly Thr Ser Asn Lys Asp Trp Trp Pro Glu Gly Leu Asn Leu 50 60

Asp Ile Leu His Gln Gln Asp Arg Lys Ser Asp Pro Met Asp Pro Asp 65 70 75 80

Phe Asn Tyr Arg Glu Glu Val Arg Lys Leu Asp Phe Asp Ala Leu Lys 85 90 95

Lys Asp Val His Ala Leu Met Thr Asp Ser Gln Glu Trp Trp Pro Ala

100 105 110 Asp Trp Gly His Tyr Gly Gly Leu Met Ile Arg Met Ala Trp His Ser 115 120 Ala Gly Thr Tyr Arg Ile Ala Asp Gly Arg Gly Gly Gly Thr Gly 135 Ser Gln Arg Phe Ala Pro Leu Asn Ser Trp Pro Asp Asn Val Ser Leu 150 155 Asp Lys Ala Arg Arg Leu Leu Trp Pro Ile Lys Lys Lys Tyr Gly Asn 170 Lys Ile Ser Trp Ala Asp Leu Met Ile Leu Ala Gly Thr Val Ala Tyr 180 Glu Ser Met Gly Leu Pro Ala Tyr Gly Phe Ser Phe Gly Arg Val Asp Ile Trp Glu Pro Glu Lys Asp Ile Tyr Trp Gly Asp Glu Lys Glu Trp Leu Ala Pro Ser Asp Glu Arg Tyr Gly Asp Val Asn Lys Pro Glu Thr 235 Met Glu Asn Pro Leu Ala Ala Val Gln Met Gly Leu Ile Tyr Val Asn Pro Glu Gly Val Asn Gly His Pro Asp Pro Leu Arg Thr Ala Gln Gln Val Leu Glu Thr Phe Ala Arg Met Ala Met Asn Asp Glu Lys Thr Ala 275 Ala Leu Thr Ala Gly Gly His Thr Val Gly Asn Cys His Gly Asn Gly 295 Asn Ala Ser Ala Leu Ala Pro Asp Pro Lys Ala Ser Asp Val Glu Asn 315 305 Gln Gly Leu Gly Trp Gly Asn Pro Asn Met Gln Gly Lys Ala Ser Asn 330 Ala Val Thr Ser Gly Ile Glu Gly Ala Trp Thr Thr Asn Pro Thr Lys Phe Asp Met Gly Tyr Phe Asp Leu Leu Phe Gly Tyr Asn Trp Glu Leu Lys Lys Ser Pro Ala Gly Ala His His Trp Glu Pro Ile Asp Ile Lys 375

Lys Glu Asn Lys Pro Val Asp Ala Ser Asp Pro Ser Ile Arg His Asn

Pro Ile Met Thr Asp Ala Asp Met Ala Ile Lys Val Asn Pro Thr Tyr

Arg Ala Ile Cys Glu Lys Phe Met Ala Asp Pro Glu Tyr Phe Lys Lys 425

420

395

410

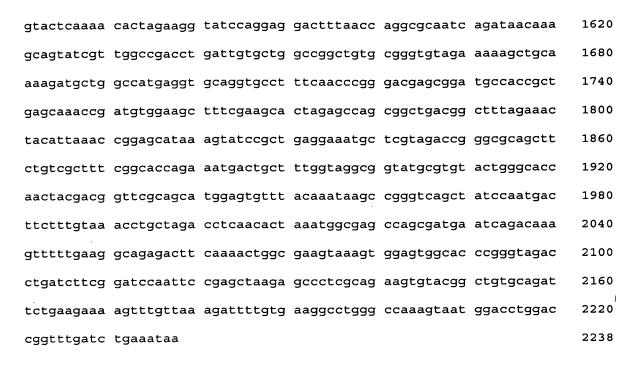
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Thr Phe Ala Lys Ala Trp Phe Lys Leu Thr His Arg Asp Leu Gly Pro Lys Ser Arg Tyr Ile Gly Pro Glu Val Pro Ala Glu Asp Leu Ile Trp Gln Asp Pro Ile Pro Ala Gly Asn Thr Asp Tyr Cys Glu Glu Val Val 470 Lys Gln Lys Ile Ala Gln Ser Gly Leu Ser Ile Ser Glu Met Val Ser 485 Thr Ala Trp Asp Ser Ala Arg Thr Tyr Arg Gly Ser Asp Met Arg Gly 505 Gly Ala Asn Gly Ala Arg Ile Arg Leu Ala Pro Gln Asn Glu Trp Gln Gly Asn Glu Pro Glu Arg Leu Ala Lys Val Leu Ser Val Tyr Glu Gln 535 Ile Ser Ala Asp Thr Gly Ala Ser Ile Ala Asp Val Ile Val Leu Ala Gly Ser Val Gly Ile Glu Lys Ala Ala Lys Ala Ala Gly Tyr Asp Val Arg Val Pro Phe Leu Lys Gly Arg Gly Asp Ala Thr Ala Glu Met Thr Asp Ala Asp Ser Phe Ala Pro Leu Glu Pro Leu Ala Asp Gly Phe Arg Asn Trp Gln Lys Lys Glu Tyr Val Val Lys Pro Glu Glu Met Leu Leu 610 Asp Arg Ala Gln Leu Met Gly Leu Thr Gly Pro Glu Met Thr Val Leu 635 Leu Gly Gly Met Arg Val Leu Gly Thr Asn Tyr Gly Gly Thr Lys His 645 Gly Val Phe Thr Asp Cys Glu Gly Gln Leu Thr Asn Asp Phe Phe Val 665 Asn Leu Thr Asp Met Gly Asn Ser Trp Lys Pro Val Gly Ser Asn Ala 675 Tyr Glu Ile Arg Asp Arg Lys Thr Gly Ala Val Lys Trp Thr Ala Ser 695 Arg Val Asp Leu Val Phe Gly Ser Asn Ser Leu Leu Arg Ser Tyr Ala 715 Glu Val Tyr Ala Gln Asp Asp Asn Gly Glu Lys Phe Val Arg Asp Phe Val Ala Ala Trp Thr Lys Val Met Asn Ala Asp Arg Phe Asp Val Ala

Ser

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<210> 8

<211> 745

<212> PRT

<213> Microscilla furvescens

<400> 8

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Gly Gly Thr Lys Asn Arg Asp Trp Trp Pro Asn Met Leu Asn Leu Gly 35 40 45

Ile Leu Arg Gln His Ser Ser Leu Ser Asp Pro Asn Asp Pro Asp Phe 50 55 60

Asp Tyr Ala Glu Glu Phe Lys Lys Leu Asp Leu Ala Ala Val Lys Lys 65 70 75 80

Asp Leu Ala Ala Leu Met Thr Asp Ser Gln Asp Trp Trp Pro Ala Asp 85 90 95

Tyr Gly His Tyr Gly Pro Phe Phe Ile Arg Met Ala Trp His Ser Ala 100 105 110

Gly Thr Tyr Arg Ile Gly Asp Gly Arg Gly Gly Gly Ser Gly Ser 115 120 125

Gln Arg Phe Ala Pro Leu Asn Ser Trp Pro Asp Asn Ala Asn Leu Asp 130 135 140

Lys Ala Arg Leu Leu Trp Pro Ile Lys Gln Lys Tyr Gly Arg Lys 145 150 155 160 Ile Ser Trp Ala Asp Leu Met Ile Leu Thr Gly Asn Val Ala Leu Glu Thr Met Gly Phe Lys Thr Phe Gly Phe Ala Gly Gly Arg Ala Asp Val 185 Trp Glu Pro Glu Glu Asp Val Tyr Trp Gly Ala Glu Thr Glu Trp Leu Gly Asp Lys Arg Tyr Glu Gly Asp Arg Glu Leu Glu Asn Pro Leu Gly Ala Val Gln Met Gly Leu Ile Tyr Val Asn Pro Glu Gly Pro Asn Gly 235 Lys Pro Asp Pro Ile Ala Ala Arg Asp Ile Arg Glu Thr Phe Gly Arg Met Ala Met Asn Asp Glu Glu Thr Val Ala Leu Ile Ala Gly Gly 265 His Thr Phe Gly Lys Thr His Gly Ala Ala Asp Ala Glu Lys Tyr Val 275 Gly Arg Glu Pro Ala Ala Gly Ile Glu Glu Met Ser Leu Gly Trp 295 Lys Asn Thr Tyr Gly Thr Gly His Gly Ala Asp Thr Ile Thr Ser Gly 305 Leu Glu Gly Ala Trp Thr Lys Thr Pro Thr Gln Trp Ser Asn Asn Phe Phe Glu Asn Leu Phe Gly Tyr Glu Trp Glu Leu Thr Lys Ser Pro Ala Gly Ala Tyr Gln Trp Lys Pro Lys Asp Gly Ala Gly Ala Gly Thr Ile Pro Asp Ala His Asp Pro Ser Lys Ser His Ala Pro Phe Met Leu Thr 375 Thr Asp Leu Ala Leu Arg Met Asp Pro Asp Tyr Glu Lys Ile Ser Arg Arg Tyr Tyr Glu Asn Pro Asp Glu Phe Ala Asp Ala Phe Ala Lys Ala Trp Tyr Lys Leu Thr His Arg Asp Met Gly Pro Lys Val Arg Tyr Leu 425 Gly Pro Glu Val Pro Gln Glu Asp Leu Ile Trp Gln Asp Pro Ile Pro Asp Val Ser His Pro Leu Val Asp Glu Asn Asp Ile Glu Gly Leu Lys Ala Lys Ile Leu Glu Ser Gly Leu Thr Val Ser Glu Leu Val Ser Thr 475



Ala Trp Ala Ser Ala Ser Thr Phe Arg Asn Ser Asp Lys Arg Gly Gly 485 490 Ala Asn Gly Ala Arg Ile Arg Leu Ala Pro Gln Lys Asp Trp Glu Val Asn Asn Pro Gln Gln Leu Ala Arg Val Leu Lys Thr Leu Glu Gly Ile Gln Glu Asp Phe Asn Gln Ala Gln Ser Asp Asn Lys Ala Val Ser Leu 535 Ala Asp Leu Ile Val Leu Ala Gly Cys Ala Gly Val Glu Lys Ala Ala Lys Asp Ala Gly His Glu Val Gln Val Pro Phe Asn Pro Gly Arg Ala 570 Asp Ala Thr Ala Glu Gln Thr Asp Val Glu Ala Phe Glu Ala Leu Glu 580 585 Pro Ala Ala Asp Gly Phe Arg Asn Tyr Ile Lys Pro Glu His Lys Val 600 Ser Ala Glu Glu Met Leu Val Asp Arg Ala Gln Leu Leu Ser Leu Ser Ala Pro Glu Met Thr Ala Leu Val Gly Gly Met Arg Val Leu Gly Thr Asn Tyr Asp Gly Ser Gln His Gly Val Phe Thr Asn Lys Pro Gly Gln Leu Ser Asn Asp Phe Phe Val Asn Leu Leu Asp Leu Asn Thr Lys Trp Arg Ala Ser Asp Glu Ser Asp Lys Val Phe Glu Gly Arg Asp Phe Lys Thr Gly Glu Val Lys Trp Ser Gly Thr Arg Val Asp Leu Ile Phe Gly 695 Ser Asn Ser Glu Leu Arg Ala Leu Ala Glu Val Tyr Gly Cys Ala Asp 705 Ser Glu Glu Lys Phe Val Lys Asp Phe Val Lys Ala Trp Ala Lys Val

730

Met Asp Leu Asp Arg Phe Asp Leu Lys
740 745